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## Today's Webinar is: Advancing TBI Care for Veterans: Updates from the Polytrauma System of Care

June 19, 2013, 1-2:30p.m. EDT

#### **Presenters**

Alison Cernich, Ph.D., ABPP

Board Certified in Clinical Neuropsychology
Acting Deputy Director for Veterans Affairs for the Defense Centers of Excellence for Psychological Health and TBI (DCoE)

Treven Pickett, PsyD, ABPP

Board Certified in Rehabilitation Psychology
Acting VA Senior Liaison for TBI for the Defense Centers of Excellence for Psychological
Health and TBI (DCoE)

#### Moderator

Joel Scholten, M.D.

Associate Chief of Staff, Rehabilitation Services, Washington DC VA Medical Center



### **Continuing Education**

This webinar has been approved for the following:

- 1.5 AMA PRA Category 1 Credits™
- 1.5 Credits by the American Psychological Association
- 1.5 Nursing contact hours as a co-provider with the American Nurses Credentialing Center
- 1.75 CE Contact hours for Physical Therapist and Assistant approved by the State of Illinois
- 1.75 CE Contact hours for Occupational Therapist and Assistant approved by the State of Illinois
- 1.5 CEHs for Social Work approved by the Missouri Division of Professional Registration Committee for Social Work

Please note that DVBIC's awarding of continuing education credit is limited in scope to health care providers who actively provide psychological health and traumatic brain injury care to U.S. active-duty service members, reservists, National Guardsmen, military veterans and/or their families.

Only those who registered prior to 11:59 p.m. EDT on June 16, 2013 are eligible to receive CE credit.



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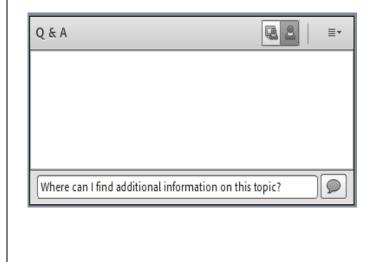




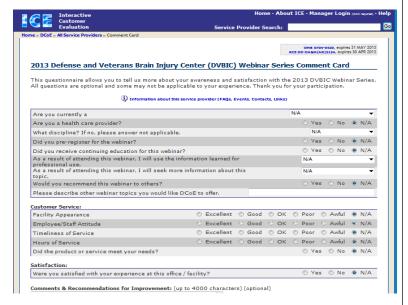
#### **Additional Webinar Details**

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- Throughout the webinar, you are welcome to submit questions via the Adobe Connect or Defense Connect Online question box located on the screen.
- The question box is monitored during the webinar, and questions will be forwarded to our presenters for response during the question-and-answer period.
- The presenters will respond to as many questions as time permits.

### **Webinar Topic Overview**

The Department of Veterans Affairs (VA) Polytrauma System of Care provides comprehensive, high quality, interdisciplinary rehabilitation. Teams of providers plan and administer an individually tailored rehabilitation plan to maximize recovery and functional independence. Traumatic brain injury (TBI) care is available throughout the entire Polytrauma System of Care, which includes five Rehabilitation Centers, five Transitional Rehabilitation Programs, 23 Network Sites, 87 Support Clinic Teams and 39 Points of Contact.

The speakers will describe the types of care available in the VA Polytrauma System and how to access rehabilitation programs. They will highlight special VA projects and programs that promote improved access and quality for veterans diagnosed with TBI. Finally, they will present research findings and recommendations to enhance quality in future program development.

### **Speaker**



Alison Cernich, Ph.D., ABPP
Board Certified in Clinical
Neuropsychology
Acting Deputy Director for
Veterans Affairs for the Defense
Centers of Excellence for
Psychological Health and TBI
(DCoE)

Alison Cernich, Ph.D., is a board certified neuropsychologist, who serves as the acting deputy director for Veterans Affairs for DCoE. She received her doctoral degree in Clinical Psychology from Fairleigh Dickinson University, completed a pre-doctoral research fellowship in rehabilitation outcomes measurement at the Kessler Medical Rehabilitation Research & Education Corp. — funded by the National Institutes of Disability and Rehabilitation Research — and a post-doctoral fellowship in cognitive neurosciences at the National Rehabilitation Hospital in Washington, D.C.

She was previously the director of neuropsychology and director of the Polytrauma Support Clinical Team at the VA Maryland Health Care System. She is an assistant professor of neurology and psychiatry at the University of Maryland School of Medicine. She is the lead or contributing author on multiple peer-reviewed articles and conference presentations, with a specific emphasis on TBI and computerized neuropsychological assessment.

### **Speaker**



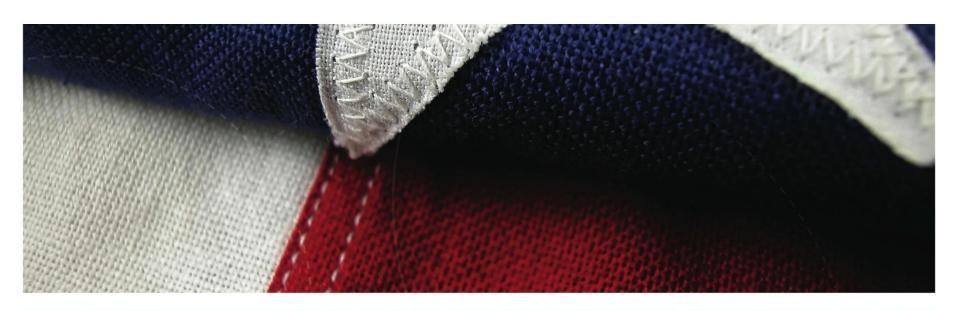
Treven Pickett, PsyD, ABPP Board Certified in Rehabilitation Psychology Acting VA Senior Liaison for TBI for the Defense Centers of Excellence for Psychological Health and TBI (DCoE)

Treven Pickett, PsyD, ABPP, is a neuropsychologist and board certified rehabilitation psychologist. Dr. Pickett has served as the associate chief and supervisory psychologist for the Mental Health Service at the Hunter Holmes McGuire VA Medical Center in Richmond, Va., since February 2008. In this position, his responsibilities have included the supervision of the Psychology Section, Homeless Program and Compensated Work Therapy programs. Dr. Pickett was the training director for a rehabilitation psychology fellowship (2007-2010), and he continues to co-direct a Mental Illness Research and Clinical Center psychology fellowship program. His clinical involvements in the VA system have ranged from those as a neuropsychologist in the Polytrauma System of Care to psychological assessment and intervention services for veterans with a spectrum of mental health conditions. He is the principal investigator on studies investigating the neurocognitive sequelae of TBI and PTSD through the VISN 6 Mental Illness Research and Education Clinical Center and **DVBIC-Richmond.** 

#### **Disclaimer**

The views expressed in this presentation are those of the presenters and moderator and do not reflect the official policy of the Department of Defense, Department of Veterans Affairs or the U. S. Government.

We do not have a relevant financial relationship to disclose, and we do not intend to discuss an off-label/investigative use of a commercial product.



## Advanced Traumatic Brain Injury (TBI) Care for Veterans: Updates from the VA Polytrauma System of Care

Alison Cernich, Ph.D., ABPP

Board Certified in Clinical Neuropsychology, Acting Deputy Director for Veterans Affairs for Defense Centers of Excellence (DCOE) for Psychological Health and TBI

Treven Pickett, PsyD, ABPP

Board Certified in Rehabilitation Psychology, Acting VA Senior Liaison for TBI for Defense Centers of Excellence (DCOE) for Psychological Health and TBI



## **Learning Objectives**

- Understand the types of care available in the Department of Veterans Affairs (VA) Polytrauma System of Care (PSC) and how to access rehabilitation programs.
- Describe the TBI Screening and Evaluation program, including a description of procedure, resultant diagnoses, and validation of the screening and evaluation process.
- Recognize initiatives underway in the VA PSC to increase access to care, including telehealth initiatives, and quality of care, including integrative medicine initiatives.
- Provide overview of quality enhancement research to determine common concerns of Veterans seeking care in the Department, and evaluation of procedures and programs.

## VA Polytrauma / TBI System of Care

Integrated System of Care: Over 100 specialized rehabilitation sites

5
Polytrauma
Rehabilitation
Centers

23 Polytrauma Network Sites 87 Polytrauma Support Clinic Teams 39
Polytrauma
Points of
Contact

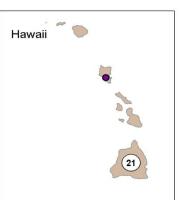
- · Interdisciplinary care coordination and case management
- · Advanced rehabilitation practices and equipment with focus on independence and community reintegration
- Provide life-long care and access to a continuum of services

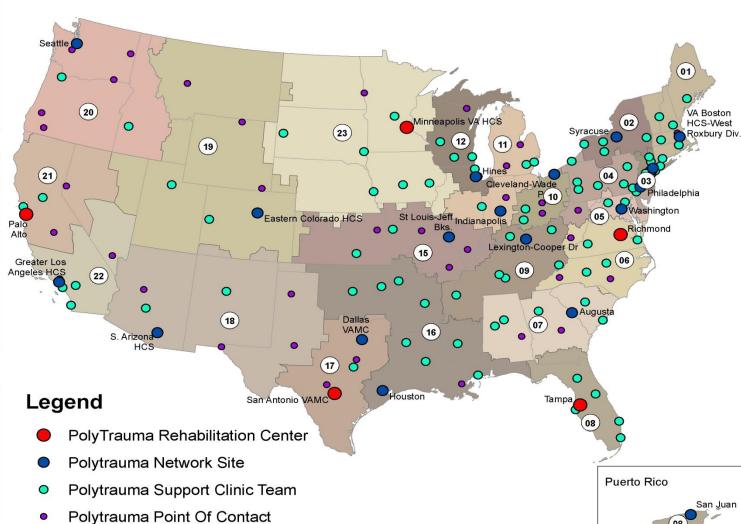
#### VHA Polytrauma/TBI System of Care FY2012

VHA Polytrauma System of Care FY 2012









Map Created By: RORC-REAP (ERL)

ArcGIS 10

Map Creation Date: January 25th, 2012

Map Information Provided By: Sonya M. Sconiers (ORS)

## **Polytrauma System of Care**

- All Operations Enduring Freedom and Iraqi Freedom and New Dawn (OEF/OIF/OND) service members are eligible for care for five years after service. Any service-related injury or disability entitles Veteran to a lifetime of care for that limitation
- In Fiscal Year 2012:
  - >75,000 unique Veterans with TBI treated in VA
  - >45,000 unique Veterans served in PSC (outpatient) clinics
  - 1,114 staff provided services in the PSC
  - VA invested approximately \$231M for TBI care for Veterans in FY2012

## VA Polytrauma Rehabilitation Centers



Richmond



Minneapolis





Tampa



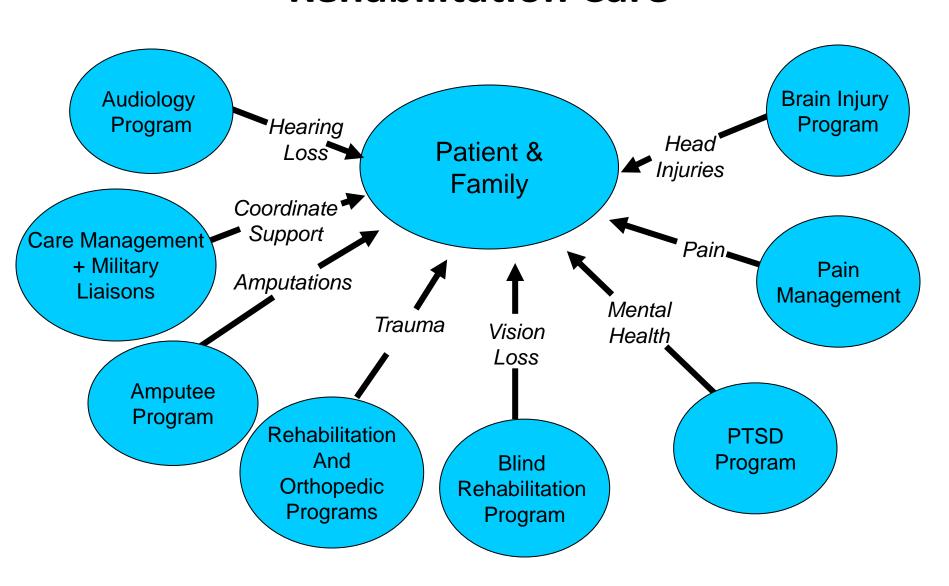
Palo Alto

San Antonio

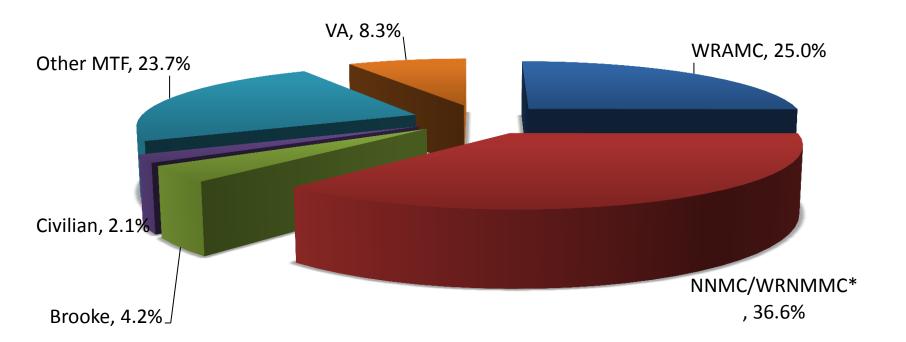
## Polytrauma Rehabilitation Centers (PRC)

- Five Level 1 medical centers providing the highest echelon of comprehensive medical and rehabilitative services (inpatient and outpatient) for the most complex and severely injured:
- National VA leaders in polytrauma/TBI providing consultation, medical education, research, and program development for PSC
- Accredited by Commission on Accreditation of Rehabilitation Facilities (CARF) for inpatient TBI and general rehabilitation
- Collaborate with Defense and Veterans Brain Injury Center (DVBIC) and national TBI Model Systems project

## Integration of Comprehensive Rehabilitation Care



## Foreign Theater Injured Referral Sources (FY03- Q1 FY13)



## Polytrauma Rehabilitation Center (PRC) Population (March 2003 through December 31, 2012)

2,543 inpatients received PRC (inpatient) care

#### 1,450 Active Duty SMs

27 new AD patients in Q1 FY13

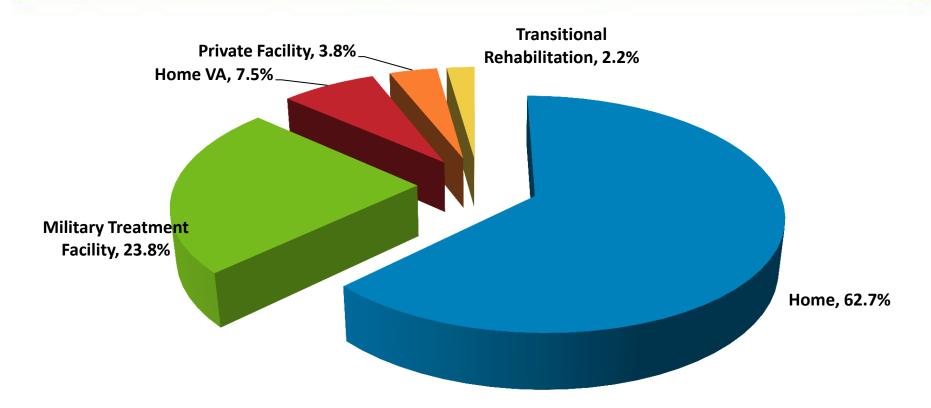
#### 1,092 injured in foreign theater

• 14 new patients in Q1 FY13

#### 1,093 Veterans

32 new patients in Q1 FY13

## Discharge Destination from PRCs OEF/OIF/OND Injured (FY03 – Q1 FY13)



## Comparison - PRCs to Academic/Private Sector

#### VA Polytrauma Rehabilitation Center (CY 2012)

- Average rehabilitation Length of Stay (LOS)- 48 days
- LOS average range: 97 days for the more severe, 31 days for the less severe
- 78% have Community Discharge (to Home or Military with Functional Independence Measure >90)

#### • TBIMS (Academic):

- Average LOS in rehabilitation 25 days
- 83% Rehabilitation Discharge to 'Private' Setting

#### Uniform Data Services (Private/Academic) Discharge:

- Average LOS in rehabilitation 16 days
- 73% of TBI patients have a Community Discharge

## **Polytrauma Network Sites**

- 23 regional Level 2 medical centers providing full range of comprehensive follow-on medical and rehabilitative services (inpatient and outpatient) for patients recovering from polytrauma and TBI (1-2 per VISN):
  - Develop and support patient's rehabilitation plan through comprehensive interdisciplinary, specialized team
  - Serve as resource and coordinate services for TBI and polytrauma across each VISN (VA, DoD, private sector)
- VISN leader for polytrauma/TBI consultation, education, monitoring outcomes, and program development for system of care
- Accredited by CARF for inpatient general rehabilitation (300+ inpatient beds available)

## Polytrauma Support Clinic Teams

- 87 Level 3 teams at medical centers with a dedicated <u>outpatient</u> <u>interdisciplinary team</u> of rehabilitation specialists
- Provide specialty rehabilitation care closer to home
  - Evaluate and develop individualized treatment plan
  - Provide interdisciplinary rehabilitation care and long-term management of patients with rehabilitation needs
  - Coordinate clinical and support services for patients and families
- Conduct comprehensive evaluations of patients with positive TBI screenings, develop and implement rehabilitation and community re-integration plans

## **Polytrauma Point of Contact**

- Designated at 39 medical centers without specialized rehabilitation teams
- Designated VA primary care staff member knowledgeable in the Polytrauma System of Care
- Coordinate case management and referral within Polytrauma System of Care
- Knowledgeable about rehabilitation services provided within local community, and facilitates referral for such services as necessary

## Polytrauma System of Care Handbook

- Updated March 20, 2013
- The 2013 PSC Handbook:
  - Defines policies/procedures for PSC operation
  - Establishes responsibilities for the operation of the PSC
  - Clarifies requirements for clinical care, and management of clinical processes throughout the PSC
  - Establishes 5th PRC site in San Antonio, TX
- Specifies a wide range of clinical programs to support the Veteran throughout the lifespan

# TBI from Operation Enduring Freedom/Operation Iraqi Freedom/Operation New Dawn (OEF/OIF/OND)

- 7-12% of OEF/OIF/OND Veterans who received medical care in the VA have confirmed TBI
  - ~60,000 total (of 750,000 screened)
    - 95% mild
    - 5% moderate-severe (2,500-3,000)
- 73% of Veterans with symptomatic mild TBI also have mental health diagnosis, most commonly Post Traumatic Stress Disorder (PTSD)
- >90% also have either PTSD or chronic pain disorder

www.queri.research.va.gov/ptbri/docs/vha-tbi-screening-eval.pdf

Table III. Moderate-to-very severe neurobehavioural symptoms by TBI evaluation results.

Variable	TBI (n = 30 267)		No TBI (n = 20934)			
					TBI vs No TBI	
	n	%	n	%	Odds ratio <sup>a</sup>	95% CI
Moderate-to-very severe symptoms in last 30 days						_
Irritability, easily annoyed	25 846	85	16 284	78	1.64	1.57, 1.72
Sleep disturbance	25 562	84	16 180	77	1.62	1.55, 1.70
Forgetfulness	24 972	83	14 306	68	2.21	2.12, 2.30
Anxious or tense	24 273	80	14946	71	1.62	1.56, 1.70
Headaches	23 553	78	13 352	64	2.05	1.97, 2.13
Poor concentration	23 021	76	12948	62	1.98	1.90, 2.06
Poor frustration tolerance, easily overwhelmed	22 697	75	13 692	65	1.62	1.55, 1.68
Fatigue	20816	69	12472	60	1.58	1.52, 1.64
Hearing difficulty	19845	66	11 288	54	1.62	1.56, 1.68
Slowed thinking, difficulty organizing, difficulty finishing things	19377	64	10 487	50	1.84	1.77, 1.90
Depressed or sad	18936	63	11 805	56	1.35	1.30, 1.40
Sensitivity to noise	17709	59	10 111	48	1.59	1.53, 1.65
Sensitivity to light	16770	55	9132	44	1.67	1.61, 1.73
Difficulty making decisions	16738	55	9055	43	1.69	1.63, 1.75
Numbness of tingling in parts of body	15 181	50	8854	42	1.49	1.44, 1.55
Change in appetite	14321	47	8123	39	1.45	1.40, 1.50
Vision problems, blurring, trouble seeing	13327	44	7384	35	1.57	1.51, 1.63
Feeling dizzy	12356	41	6099	29	1.80	1.73, 1.87
Poor co-ordination	12280	41	5768	28	1.88	1.81, 1.95
Loss of balance	11749	39	5736	27	1.81	1.74, 1.88
Nausea	9015	30	4496	21	1.63	1.56, 1.70
Change in taste or smell	6377	21	3091	15	1.70	1.62, 1.78
Moderate-to-very severe symptom interference in last 30 $\mathrm{days}^b$	21 160	74	12 371	65	2.10	2.00, 2.19

Scholten JD et al. Brain Injury 2012;26:1177-1184.

## Individualized Rehabilitation and Community Reintegration Care Plan

The Individualized Rehabilitation and Community Reintegration Care Plan should be completed for EVERY individual who is being discharged from inpatient rehabilitation or receives outpatient rehabilitation services and meets the all of the following criteria:

- Is diagnosed with TBI/Polytrauma;
- Was referred to the TBI/Polytrauma team for assessment and treatment;
- Required and received interdisciplinary rehabilitation assessment/treatment including medical, case management PLUS at least one of the following; Physical Therapy, Occupational Therapy, Speech & Language Pathology, Psychology, Recreation Therapy, Kinesiotherapy, Vocational Rehabilitation, Blind Rehab;
- Was determined to benefit from rehabilitation treatments for functional disabilities related to TBI/polytrauma;

## **Polytrauma Case Management**

- Veterans in the PSC are assigned a Polytrauma Case Manager (PCM)
- PCM caseload guided by complexity of Polytrauma Veteran followed.
- Case management includes
  - Coordination of services
  - Ongoing evaluation of rehabilitation and psychosocial needs
  - Family education and support services
  - Partnership with other VA and DoD case managers to assure continuity in care management from battlefield to home

### **Continuum of Special Programs**

- Transitional Rehabilitation Program
- Emerging Consciousness Program
- Polytrauma Telehealth Network
- Advanced Technology Applications
- Drivers Training Programs (Simulator/Road)
- Amputation System of Care
- Blind Rehabilitation
- Mild TBI Screening and Evaluation Program

## Polytrauma Transitional Rehabilitation Program

- Located at each PRC site, linked in with local and regional military treatment facilities
- 10-20 beds for extended stay rehabilitation (one to six months)
- Focus on community reintegration and vocational rehabilitation
- Additional specialized treatment and program support provided as necessary to include:
  - PTSD services
  - Substance abuse
  - Pain management
  - Drivers Training Rehabilitation
  - Vocational Rehabilitation

## Polytrauma Transitional Rehabilitation Program Experience FY08-FY12

Average Length of Stay 66.9 days

Average Age 32.8

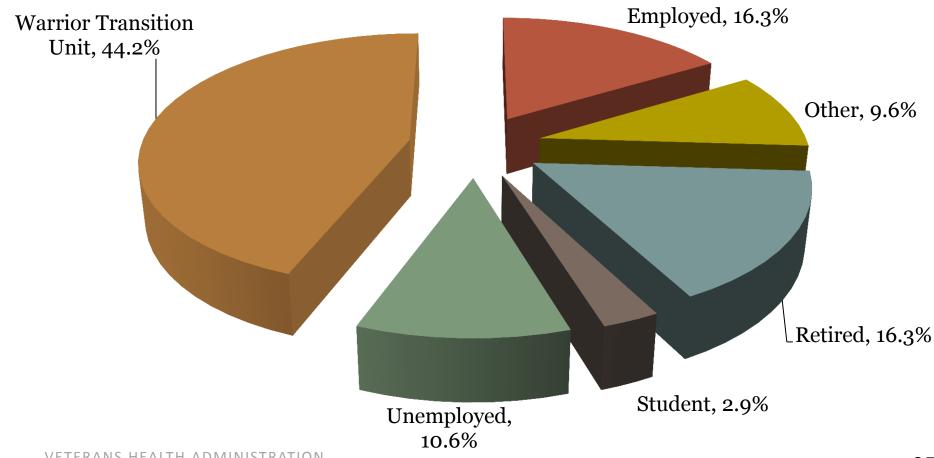
415 Unique Patients

OEF/OIF 23.4%

Female 5.1%

Source: Treatment Specialty Code Cube Treatment Specialty Code 82 @ PRC Facilities Data through 9/21/12

## **Transitional Rehabilitation Program** FY12 Discharge/Vocational Outcomes



## **Emerging Consciousness Program**

- Emerging Consciousness Program
  - 2-4 beds at each PRC
  - Common assessment and management protocols
  - Linked with academic centers who are leaders in Disorders Of Consciousness
  - Embedded Epilepsy Centers of Excellence

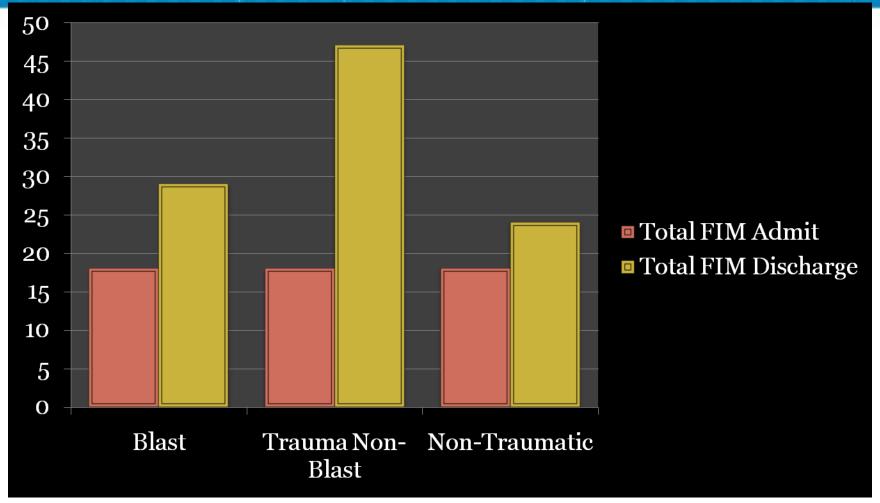




### **Emerging Consciousness Program Outcomes**

- Outcomes of the VA Emerging Consciousness
  - >166 patients
  - Consecutive admissions at 4 PRCs 2003-2011
  - Main outcome emergence to consciousness based on:
    - Coma Recovery Scale Revised
    - Object Use (feeding)
    - Communication (responding to commands)
    - Rancho 3 or higher
  - Emergence from coma in 70% blast TBI, 85% non-blast TBI and 60% anoxic BI
  - Of those who emerge, 75% do so by 4 months post-injury

### Emerging Consciousness Program FIM Scores



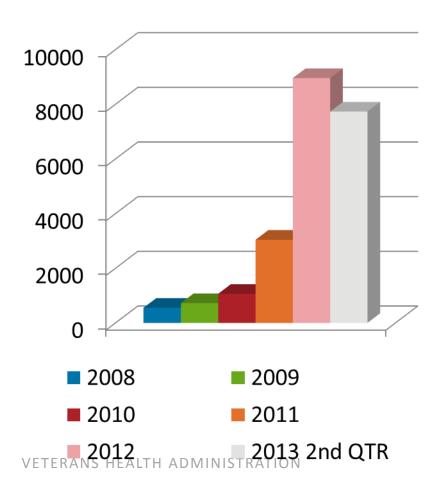
### Polytrauma Telehealth Network

- Links all VA PSC sites
- Capacity to link with Department of Defense sites
- High-resolution videoconferencing
  - Educational resource for providers and families
  - Facilitates discharge planning and care coordination
  - Remote provider-to-provider consultation
  - Remote evaluation for specialized services

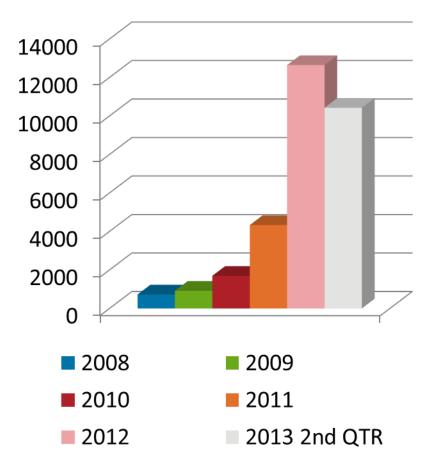


### **Telerehabilitation Growth**

#### **Number of Unique Veterans**



#### **Number of Encounters**



### **Concussion Coach**



- Concussion Coach is a mobile phone application for Veterans and Service members who experience symptoms that may be related to brain injury.
- It can be used as a stand-alone
  education and symptom management
  tool, or to augment face-to-face care
  with a healthcare professional.

### **Assistive Technology**



Balance/Vestibular



**Driving Simulator** 



Erigo



Eye Gaze



**Assisted Eating** 



Laser Cane

### Assistive Technology (AT) Centers of Excellence

- Comprehensive AT Teams established at five sites
  - Rehabilitation Engineers
  - Therapists are certified by Rehabilitation Engineering and Assistive Technology Society of North America
    - Cognitive and Mobility Therapists
  - Collaboration with University of Pittsburgh Center for Assistive Technology
  - CARF preparation underway at all sites
  - Uniform templates for all assessments and treatments
- Virtual consultation through telehealth across PSC
- Equipment and services available to <u>any</u> Veteran with need

### **Amputation System of Care**

- Comprehensive rehabilitation system to care for Veterans and Active Duty Service members with amputations transitioning to the VA. Integrated with PSC to leverage skills with care needs.
  - Regional Amputation Centers (seven)
    - Inpatient, outpatient, prosthetics, assessment
  - Polytrauma Amputation Network Sites (15)
    - Outpatient, prosthetics, assessment
  - Amputation Clinic Teams (100)
    - Assessment, outpatient
  - Amputation Points of Contact (30)
    - Primary care, case management

## Polytrauma Integrative Medicine Initiative (PIMI)

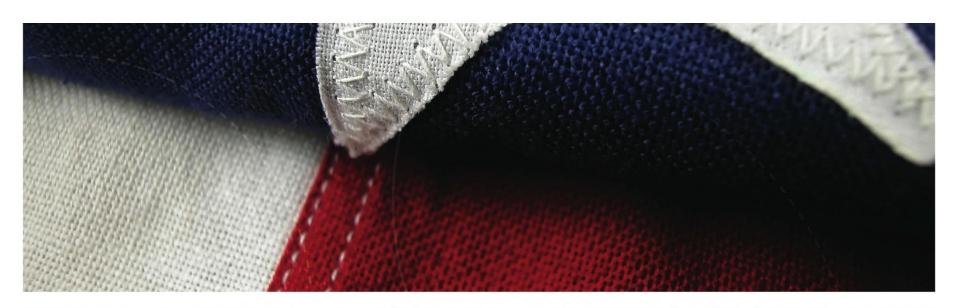
- Collaboration with the Office of Patient Centered Care and Culture Transformation
- Deployed at three PRCs and the Rehabilitation Outcomes
   Research Center in Gainesville
- Feasibility study of incorporating an Integrative Medicine
   (IM) approach to polytrauma care
- Investigating the impact of IM model on resource utilization and physical/psychological health

### **Key Research Activities**

- Polytrauma Rehabilitation Centers and TBI Model Systems (TBIMS)
  - Establishes parallel VA database to TBIMS (with additional VA variables)
  - Benchmarks VA outcomes with those of national TBIMS Centers
  - Fosters collaborative research with national TBIMS Centers
- TBI Veterans Health Registry of OEF/OIF /OND Veterans
  - OEF/OIF /OND Based Registry of Veterans experiencing TBI-related symptoms
  - Comparisons of screening, diagnostic methods, and treatment options
- Polytrauma and Blast-Related Injuries Quality Enhancement Research Initiative (QUERI):
  - Portfolio includes 40 funded studies
  - 34 publications associated with grants listed as QUERI-related

### What has PSC accomplished? 2005-2013

- More than 2,500 inpatients received PRC care
- More than 400 patients received Polytrauma Transitional Residential Program care following inpatient services
- More than 170,000 unique individuals treated in PSC (outpatient) clinics
  - More than 900,000 total PSC (outpatient) encounters
- More than 3,100 telehealth encounters
- More than 650,000 OEF/OIF/OND Veterans screened for TBI
- More than 75,000 Comprehensive TBI Evaluations



### **Thank You**

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Treven.Pickett@va.gov

For more information visit <a href="http://www.polytrauma.va.gov/">http://www.polytrauma.va.gov/</a>



# Resources for DVBIC May 2013 Webinar Advancing TBI Care for Veterans: Updates from the Polytrauma System of Care

#### Websites:

- U.S. Department of Veterans Affairs: http://va.gov
- U.S. Department of Veterans Affairs Health Resource Center: <a href="http://www.va.gov/healthresourcecenter/">http://www.va.gov/healthresourcecenter/</a>
- U.S. Department of Veterans Affairs My HealtheVet <a href="https://www.myhealth.va.gov/index.html">https://www.myhealth.va.gov/index.html</a>
- U.S. Department of Veterans Affairs Veterans Crisis Line <a href="http://www.mentalhealth.va.gov/suicide\_prevention/">http://www.mentalhealth.va.gov/suicide\_prevention/</a>
- U.S. Department of Veterans Affairs Understanding Traumatic Brain Injury <a href="http://www.polytrauma.va.gov/understanding-tbi/">http://www.polytrauma.va.gov/understanding-tbi/</a>
- U.S. Department of Veterans Affairs Terminology and Definitions related to TBI care <a href="http://www.polytrauma.va.gov/news-and-resources/terminology-and-definitions.asp">http://www.polytrauma.va.gov/news-and-resources/terminology-and-definitions.asp</a>

# Resources for DVBIC May 2013 Webinar Advancing TBI Care for Veterans: Updates from the Polytrauma System of Care

- Veterans Crisis Line: 1-800-273-8255
- Polytrauma/TBI System of Care Toolkit Helping Veterans Get Back to Living <u>http://www.polytrauma.va.gov/downloads/VA\_TBI\_Toolkit\_Brochure.pdf</u>
- Caregiver Fact Sheet
   <a href="http://www.polytrauma.va.gov/downloads/VA\_TBI\_Caregiver\_Factsheet.pdf">http://www.polytrauma.va.gov/downloads/VA\_TBI\_Caregiver\_Factsheet.pdf</a>
- Mild TBI/Concussion Pocket Guide <u>http://www.publichealth.va.gov/docs/exposures/TBI-pocketcard.pdf</u>
- VA/DoD Clinical Practice Guidelines
   <a href="http://www.healthquality.va.gov/mtbi/concussion\_mtbi\_full\_1\_0.pdf">http://www.healthquality.va.gov/mtbi/concussion\_mtbi\_full\_1\_0.pdf</a>

# Resources for DVBIC May 2013 Webinar Advancing TBI Care for Veterans: Updates from the Polytrauma System of Care

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Vanderploeg, R.D., Groer, S., & Belanger, H.G. (2012). Initial Developmental Process of a VA Semi-Structured Clinical Interview for TBI Identification. <u>Journal of Rehabilitation</u> <u>Research and Development</u>, <u>49</u>, 545-556.

Article:

http://www.rehab.research.va.gov/jour/2012/494/pdf/vanderploeg494.pdf

Appendix 1 (Interview form):

http://www.rehab.research.va.gov/jour/2012/494/pdf/vanderploeg494appn01.pdf

Appendix 2 (Manual for Interview):

http://www.rehab.research.va.gov/jour/2012/494/pdf/vanderploeg494appn02.pdf

### References

Taylor BC, Hagel EM, Cutting A, Carlson KF, Cifu DX, Bidelspach DE, Sayer NA. Fiscal Year 2011 VA Utilization Report for Iraq and Afghanistan War Veterans Diagnosed with TBI. Prepared for the VA Polytrauma and Blast-Related Injuries QUERI #PLY 05-2010-2. September 2012. <a href="http://www.queri.research.va.gov/ptbri/docs/FY11-TBI-Diagnosis-HCU-Report.pdf">http://www.queri.research.va.gov/ptbri/docs/FY11-TBI-Diagnosis-HCU-Report.pdf</a>.

Donnelly K, Donnelly JP, Dunnam M, et al. Reliability, sensitivity, and specificity of the VA Traumatic Brain Injury Screening Tool. *J Head Trauma Rehabil.* 2011;26(6):439-453.

Belanger H, Vanderploeg RD, Soble, JR, et al. Validity of the Veterans Health Administration's Traumatic Brain Injury Screen. *Arch Phys Med Rehabil*. 2012;93(7):1234-9.

King PR, Donnelly KT, Donnelly JP, et al. Psychometric study of the Neurobehavioral Symptom Inventory, JRRD 2012:49(6): 879–88.

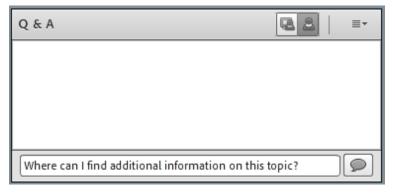
Scholten JD, Sayer NA, Vanderploeg RD, Bidelspach DE, Cifu DX. Analysis of US Veterans Health Administration comprehensive evaluations for traumatic brain injury in Operation Enduring Freedom and Operation Iraqi Freedom Veterans. *Brain Inj.* 2012;26(10):1177-84.

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### **Question & Answer Session**

 Submit questions via the Adobe Connect or Defense Connect Online question box located on the screen.



- The question box is monitored and questions will be forwarded to our presenters for response.
- We will respond to as many questions as time permits.

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